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(54) **Nonchromate metallic surface treating agent for PCM use, method for PCM surface treatment, and treated PCM steel panel**

(57) The present invention has for its object to provide a metallic surface treating agent for PCM use, which is capable of imparting high processability and corrosion resistance to PCM steel panels with the additional advantage of improved storage stability, a method for surface treatment of a PCM steel panel, a method of producing a PCM steel panel, and a PCM steel panel as produced by said method.

This invention provides a nonchromate metallic surface treating agent for PCM use  
which comprises, in each liter thereof,

(a) a silane coupling agent and/or a hydrolytic con-

densation product thereof in an amount of 0.01 to 100 g/l,

(b) water-dispersible silica in a proportion of 0.05 to 100 g/l (solids), and

(c) a zirconium compound in an amount of 0.01 to 50 g/l in terms of zirconium ion and/or a titanium compound in an amount of 0.01 to 50 g/l in terms of titanium ion.

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# EUROPEAN SEARCH REPORT

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EP 01 40 0522

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Place of search MUNICH		Date of completion of the search 3 December 2003	Examiner Mauger; J
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>			

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